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Reviewer: Anne Corrigan

Timestamp: [year=2008; month=1; day=22; hr=17; min=29; sec=19; ms=605;]

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Application No: 09849967 Version No: 6.0

Input Set:

Output Set:

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Finished: 2008-01-09 14:13:14.058
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 209 ms
Total Warnings: 0
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No. of SeqIDs Defined: 10
Actual SeqID Count: 10

SEQUENCE LISTING

<110> New York Medical College

<120> Splice Choice Antagonists as Therapeutic Agents

<130> 51230-00601

<140> 09849967

<141> 2001-05-08

<160> 10

<170> PatentIn version 3.5

<210> 1

<211> 1689

<212> DNA

<213> Gallus gallus

<220>

<221> Misc_Feature

<222> (1)..(1689)

<223> Full length cDNA sequence of Gallus gallus hnRNP A1.

<220>

<221> Misc_Feature

<222> (141)..(1276)

<223> Open reading frame of cDNA sequence from Gallus gallus hnRNP A1.

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a g c g g g c g t g a a g g c g c g a g c t g a a c g c t g g c a c g g t t t c c t a g a t c t a a a a g a a g g c c	120
g a g t t a g a g t a c c c t t c c a a a a t g g c t g c t a t t a a g g a a g a g a g a g g t g g a a g a t t a c	180
a a g a g a a a a a g g a a g a c g a t c a g c a c a g g c c a t g a g c c t a a g g a g c c a g a g c a g t t g a g a	240
a a g c t g t t c a t t g g a g g t c t g a g c t t c g a g a c g a g a t g a t a g c t t g a g a g a g c a c t t t	300
g a a a a a t g g g g c a c a c t c a c g g a c t g t g t g t g a t g a g a g a c c a c a a a c a a a a c g t t c c	360
a g a g g c t t t g g c t t t g t t a c t t a c t c t t g c g t g g a a g a g g t g g a t g c g g c c a t g a g c g c t	420
c g a c c a c a t a a g g t g g a t g g a c g t g t g g t t g a a c c a a a g a g a g c a g t t t c a a g g g a g g a t	480
t c t g t a a a g c c t g g g g c g c a t c t c a c a g t a a a g a a a a t a t t t g t t g g t g g c a t t a a a g a a	540
g a t a c a g a a g a a t a t a a t t t a a g g g g g t a c t t t g a a a c a t a t g g c a a g a t c g a a a c g a t a	600
g a a g t c a t g g a a g a c a g a c a a a g t g g a a a g a a a a g a g g c t c g c t t t t g t a a c t t t t g a t	660
g a t c a c g a t a c a g t t g a t a a a a t t g t t g t t c a g a a a t a c c a t a c t a t a a a t g g t c a t a a c	720

tgccaagata aaaaagcact ctcaaaacaa gagatgcaga ctgccagctc tcagagaggt	780
cgtgggggtg gttcaggcaa cttcatgggt cgtggaaatt ttggaggtgg tggaggaaac	840
tttggccgag gaggaaactt tgggtgaaga ggaggctatg gtggtggtgg cgggtggtggg	900
agcagaggaa gctttggggg tgggtgatgga tacaacggat ttggtgatgg tggcaactat	960
ggaggtggtc ctggctatgg cagcagaggg ggttatggtg gtggtggagg accaggatat	1020
ggaaaccag gtggtggata tggaggtgga ggaggaggat atggtggcta caatgaagga	1080
ggcaattttg gaggtggtaa ttatggaggg agtggaaact acaatgactt tggtaactac	1140
agtggacagc agcagtccaa ttacgggtccc atgaaagggtg gtggcagttt tgggtggtaga	1200
agttcaggca gtccctatgg tgggtggttat ggatctggaa gtggaagtgg gggctatggt	1260
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cgaggagttg tcaggaaagc tgcagtttac tttgagacag tcgtcccaa tgcattagag	1380
gaactgtaaa atctgccaca gaaggaacga tgatccatag tcagaaaagt tactgcagct	1440
taaacaggaa acccttcttg ttcaggactg tcatagccac agtttgcaa aagagcagct	1500
attggttaat gcaatgtagt gtcgttagat gtacatcctg aggtctttat ctggtgtagc	1560
tttgtctttc ttttttcttt ttattttccc attacatcag gtatatgccc ctgtaaattg	1620
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aaaaaaaaa	1689

<210> 2
 <211> 378
 <212> PRT
 <213> Gallus gallus

<220>
 <221> PEPTIDE
 <222> (1)..(378)
 <223> Amino acid sequence of chicken hnRNP A1.

<400> 2

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Ala	Leu	Thr	Ile	Ser	Thr	Gly	His	Gly	Pro	Leu	Gly	Pro	Gly	Gly	Leu
				20				25						30	

Ala	Leu	Leu	Pro	Ile	Gly	Gly	Leu	Ser	Pro	Gly	Thr	Thr	Ala	Ala	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

35

40

45

Leu Ala Gly Gly Pro Gly Leu Thr Gly Thr Leu Thr Ala Cys Val Val
 50 55 60

Met Ala Ala Pro Gly Thr Leu Ala Ser Ala Gly Pro Gly Pro Val Thr
 65 70 75 80

Thr Ala Thr Val Gly Gly Val Ala Ala Ala Met Ser Ala Ala Pro His
 85 90 95

Leu Val Ala Gly Ala Val Val Gly Pro Leu Ala Ala Val Ser Ala Gly
 100 105 110

Ala Ser Val Leu Pro Gly Ala His Leu Thr Val Leu Leu Ile Pro Val
 115 120 125

Gly Gly Ile Leu Gly Ala Thr Gly Gly Thr Ala Leu Ala Gly Thr Pro
 130 135 140

Gly Thr Thr Gly Leu Ile Gly Thr Ile Gly Val Met Gly Ala Ala Gly
 145 150 155 160

Ser Gly Leu Leu Ala Gly Pro Ala Pro Val Thr Pro Ala Ala His Ala
 165 170 175

Thr Val Ala Leu Ile Val Val Gly Leu Thr His Thr Ile Ala Gly His
 180 185 190

Ala Cys Gly Ala Leu Leu Ala Leu Ser Leu Gly Gly Met Gly Thr Ala
 195 200 205

Ser Ser Gly Ala Gly Ala Gly Gly Gly Ser Gly Ala Pro Met Gly Ala
 210 215 220

Gly Ala Pro Gly Gly Gly Gly Gly Ala Pro Gly Ala Gly Gly Ala Pro
 225 230 235 240

Gly Gly Ala Gly Gly Thr Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala
 245 250 255

Gly Ser Pro Gly Gly Gly Ala Gly Thr Ala Gly Pro Gly Ala Gly Gly
 260 265 270

Ala Thr Gly Gly Gly Pro Gly Thr Gly Ser Ala Gly Gly Thr Gly Gly
275 280 285

Gly Gly Gly Pro Gly Thr Gly Ala Pro Gly Gly Gly Thr Gly Gly Gly
290 295 300

Gly Gly Gly Thr Gly Gly Thr Ala Gly Gly Gly Ala Pro Gly Gly Gly
305 310 315 320

Ala Thr Gly Gly Ser Gly Ala Thr Ala Ala Pro Gly Ala Thr Ser Gly
325 330 335

Gly Gly Gly Ser Ala Thr Gly Pro Met Leu Gly Gly Gly Ser Pro Gly
340 345 350

Gly Ala Ser Ser Gly Ser Pro Thr Gly Gly Gly Thr Gly Ser Gly Ser
355 360 365

Gly Ser Gly Gly Thr Gly Gly Ala Ala Pro
370 375

<210> 3
<211> 320
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(320)
<223> Amino acid sequence of human hnRNP A1.

<400> 3

Met Ser Lys Ser Glu Ser Pro Lys Glu Pro Glu Gln Leu Arg Lys Leu
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Phe Ile Gly Gly Leu Ser Phe Glu Thr Thr Asp Glu Ser Leu Arg Ser
20 25 30

His Phe Glu Gln Thr Gly Thr Leu Thr Asp Cys Val Val Met Arg Asp
35 40 45

Pro Asn Thr Lys Arg Ser Arg Gly Phe Gly Phe Val Thr Tyr Ala Thr
50 55 60

Val Glu Glu Val Asp Ala Ala Met Asn Ala Arg Pro His Lys Val Asp
65 70 75 80

Gly Arg Val Val Glu Pro Lys Arg Ala Val Ser Arg Glu Asp Ser Gln
85 90 95

Arg Pro Gly Ala His Leu Thr Val Lys Lys Ile Phe Val Gly Gly Ile
100 105 110

Lys Glu Asp Thr Glu Glu His His Leu Arg Asp Tyr Phe Glu Gln Tyr
115 120 125

Gly Lys Ile Glu Val Ile Glu Ile Met Thr Asp Arg Gly Ser Gly Lys
130 135 140

Lys Ala Gly Phe Ala Phe Val Thr Phe Asp Asp His Asp Ser Val Asp
145 150 155 160

Lys Ile Val Ile Gln Lys Tyr His Thr Val Asn Gly His Asn Cys Glu
165 170 175

Val Arg Lys Ala Leu Ser Lys Gly Glu Met Ala Ser Ala Ser Ser Ser
180 185 190

Gln Arg Gly Arg Ser Gly Ser Gly Ala Phe Gly Gly Gly Arg Gly Gly
195 200 205

Gly Phe Gly Gly Asn Asp Asn Phe Gly Arg Gly Gly Asn Phe Ser Gly
210 215 220

Arg Gly Gly Phe Gly Gly Ser Arg Gly Gly Gly Gly Tyr Gly Gly Ser
225 230 235 240

Gly Asp Gly Tyr Asn Gly Phe Gly Asn Ala Gly Ser Asn Phe Gly Gly
245 250 255

Gly Gly Ser Tyr Asn Asp Phe Gly Asn Tyr Asn Asn Gln Ser Ser Asn
260 265 270

Phe Gly Pro Met Lys Gly Gly Asn Phe Gly Gly Arg Ser Ser Gly Pro
275 280 285

Tyr Gly Gly Gly Gly Gln Tyr Pro Ala Lys Pro Arg Asn Gln Gly Gly
 290 295 300

Tyr Gly Gly Ser Ser Ser Ser Ser Tyr Gly Ser Gly Arg Arg Pro
 305 310 315 320

<210> 4
 <211> 1136
 <212> DNA
 <213> Gallus gallus

<220>
 <221> Misc_Feature
 <222> (1)..(1136)
 <223> Open reading frame of cDNA for chicken hnRNP A1.

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 gagcttcgag acgacggatg atagcttgag agagcacttt gaaaaatggg gcacactcac 180
 ggactgtgtg gtgatgagag acccacaac aaaacgttcc agaggttttg gctttgttac 240
 ttactcttgc gtggaagagg tggatgcggc catgagcgct cgaccacata aggtggatgg 300
 acgtgtgggtt gaaccaaaga gagcagtttc aaggaggat tctgtaaagc ctggggcgca 360
 tctcacagta aagaaaatat ttgttggtgg cattaaagaa gatacagaag aatataat 420
 aaggggggtac tttgaaacat atggcaagat cgaacgata gaagtcatgg aagacagaca 480
 aagtggaaag aaaagaggct tcgcttttgt aacttttgat gatcacgata cagttgataa 540
 aattgttgtt cagaaatacc atactataaa tggtcataac tgcgaagata aaaaagcact 600
 ctcaaaacaa gagatgcaga ctgccagctc tcagagaggt cgtgggggtg gttcaggcaa 660
 cttcatgggt cgtggaaatt ttggaggtgg tggaggaaac tttggccgag gaggaaactt 720
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 ggggtggtgat ggatacaacg gatttgggtga tgggtggcaac tatggaggtg gtcttggtta 840
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 atatggaggt ggaggaggag gatatggtgg ctacaatgaa ggaggcaatt ttggaggtgg 960
 taattatgga ggcagtggaa actacaatga ctttggtaac tacagtggac agcagcagtc 1020
 caattacggt cccatgaaag gtggtggcag ttttggtggt agaagttcag gcagtccta 1080

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1136

<210> 5
<211> 10
<212> RNA
<213> Homo sapiens

<220>
<221> Misc_Feature
<222> (1)..(10)
<223> Exonic splice silencer (ESS) nucleic acid sequence for hnRN A1.

<400> 5
uagggcaggc

10

<210> 6
<211> 10
<212> RNA
<213> Gallus gallus

<220>
<221> Misc_Feature
<222> (1)..(10)
<223> Exonic splice silencer (ESS) nucleic acid sequence for hnRNP A1.

<400> 6
uagggagggc

10

<210> 7
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (1)..(1)
<223> Xaa represents a Lysine or an Arginine

<220>
<221> SITE
<222> (3)..(3)
<223> Xaa represents a phenylalanine or tyrosine.

<220>
<221> SITE
<222> (4)..(4)
<223> Xaa represents a glycine or alanine.

<220>
<221> Misc_Feature
<222> (7)..(7)

<223> Xaa can be any naturally occurring amino acid.

<220>

<221> SITE

<222> (8)..(8)

<223> Xaa represents a phenylalanine or tyrosine.

<400> 7

Xaa Gly Xaa Xaa Pro Val Xaa Xaa

1 5

<210> 8

<211> 148

<212> PRT

<213> Homo sapiens

<220>

<221> Misc_Feature

<222> (1)..(6)

<223> Correspond to amino acids 16 - 21 of hnRNP A1.

<220>

<221> Misc_Feature

<222> (7)..(39)

<223> Correspond to amino acids 22 - 54 of hnRNP A1.

<220>

<221> Misc_Feature

<222> (40)..(47)

<223> Correspond to amino acids 55 - 62 of hnRNP A1.

<220>

<221> Misc_Feature

<222> (48)..(91)

<223> Correspond to amino acids 63 - 106 of hnRNP A1.

<220>

<221> Misc_Feature

<222> (92)..(97)

<223> Correspond to amino acids 107 - 112 of hnRNP A1.

<220>

<221> Misc_Feature

<222> (98)..(140)

<223> Correspond to amino acids 113 - 145 of hnRNP A1.

<220>

<221> Misc_Feature

<222> (141)..(148)

<223> Correspond to amino acids 146 - 153 of hnRNP A1.

<400> 8

Leu Phe Ile Gly Gly Leu Ser Phe Glu Thr Thr Asp Glu Ser Leu Arg

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Ser His Phe Glu Gln Thr Gly Thr Leu Thr Asp Cys Val Val Met Arg			
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Asp Pro Asn Thr Lys Arg Ser Arg Gly Phe Gly Pro Val Thr Tyr Ala			
35	40	45	
Thr Val Glu Glu Val Asp Ala Ala Met Asn Ala Arg Pro His Lys Val			
50	55	60	
Asp Gly Arg Val Val Glu Pro Lys Arg Ala Val Ser Arg Glu Asp Ser			
65	70	75	80
Gln Arg Pro Gly Ala His Leu Thr Val Lys Lys Ile Phe Val Gly Gly			
85	90	95	
Ile Thr Val Lys Lys Ile Phe Val Gly Gly Ile Lys Glu Asp Thr Glu			
100	105	110	
Glu His His Leu Arg Asp Tyr Phe Glu Gln Tyr Gly Lys Ile Glu Val			
115	120	125	
Ile Glu Ile Met Thr Asp Arg Gly Ser Gly Lys Lys Arg Gly Phe Ala			
130	135	140	
Phe Val Thr Phe			
145			

<210> 9
 <211> 28
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Misc_Feature
 <222> (1)..(28)
 <223> hnRNP A2 is defined as human hnRNP core protein.

<220>
 <221> Misc_Feature
 <222> (1)..(28)
 <223> OTHER: Max number of positions shown; some may be missing.

<220>
 <221> Misc_Feature

<222> (1)..(6)
<223> Correspond to amino acids 11 - 16 of hnRNP A2.

<220>
<221> Misc_Feature
<222> (7)..(14)
<223> Correspond to amino acids 50 - 57 of hnRNP A2.

<220>
<221> Misc_Feature
<222> (15)..(20)
<223> Correspond to amino acids 102 - 107 of hnRNP A2.

<220>
<221> Misc_Feature
<222> (21)..(28)
<223> Correspond to amino acids 141 - 148 of hnRNP A2.

<400> 9

Leu Phe Ile Gly Gly Leu Ala Gly Phe Gly Pro Val Thr Phe Leu Phe
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Val Gly Gly Ile Arg Gly Phe Gly Phe Val Thr Phe
20 25

<210> 10
<211> 12
<212> PRT
<213> Homo sapiens

<220>
<221> Misc_Feature
<222> (1)..(12)
<223> hnRNP is defined as a human hnRNP core protein.

<220>
<221> Misc_Feature
<222> (1)..(12)
<223> Correspond to amino acids 3 - 14 of hnRNP B2.

<400> 10

Lys Thr Leu Glu Thr Val Pro Leu Glu Arg Lys Lys
1 5 10